

Status of Claims

Claims 1-6 and 17-25 are pending.
Claims 1-6 and 17-25 stand rejected.
Claims 1 and 17 have been amended.

Remarks/Arguments

The Examiner is thanked for the August 9, 2010 telephone interview clarifying the rejections set forth in the outstanding Office Action, and for the recommendations regarding Applicants' proposed claim amendments. By way of this response, Applicants have amended independent claims 1 and 17 in accordance with the amendments discussed during the interview. Reconsideration of this application is requested in view of the following remarks and accompanying amendments.

Claim Rejections – 35 U.S.C. § 103(a)

Claims 1-6, 17-23 and 25 stand finally rejected under 35 U.S.C. § 103(a) as being unpatentable over Ishii et al. (U.S. Patent 6,288,698) in view of Beck et al. ("Motion Dithering for Increasing Perceived Image Quality for Low-Resolution Displays" 13 July 1998, pages 407-410). Claim 24 stands finally rejected under 35 U.S.C. § 103(a) as being unpatentable over the above-combination, further in view of Wu et al. (U.S. Patent 6,469,708). Applicants respectfully traverse this rejection for at least the following reasons.

Independent claim 1 recites in part:

A method for processing video data in a video data processing device for display on a display device having a plurality of luminous elements to suppress a dithering pattern from appearing to a viewer observing a moving object on the display device, the moving object represented by the video data, the method comprising:

applying a dithering function to at least part of said video data in a dithering device of the video data processing device, wherein the dithering improves a grey scale portrayal of video pictures of said video data,

computing at least one motion vector from said video data in a motion estimator device of the video data processing device, said video data representing the object in motion on the display device;

changing at least one of the phase, amplitude, spatial resolution and temporal resolution of said dithering function in accordance with said at least one motion vector representing the movement of a moving object on a picture when applying the dithering function to said video data in the dithering device of the video data processing device to suppress a dithering pattern from appearing to a viewer observing the moving object on the picture; and

outputting the dithered video data from the video data processing device to the display device to suppress a dithering pattern from appearing to a viewer observing the moving object on the picture on the display device (underling emphasis added).

Claim 1 is directed to a method of suppressing a dithering pattern appearing to a viewer while observing the movement of an object on a display. This suppression is achieved by altering a dithering function according to a motion vector. The motion vector as defined by claim 1 is computed using video data representative of the movement of the object. Thus, the resulting motion vector represents the motion of the object as captured by the original video data. Both Ishii and Beck, alone or in combination, fail to teach or even remotely suggest this arrangement.

The Examiner cites the gray-scale and brightness control method of Ishii et al. (Ishii) as disclosing each of the elements of claim 1, with the exception of the claimed motion vector used to change "at least one of the phase, amplitude, spatial resolution,

and temporal resolution of said dithering function..." The Action cites Beck et al. (Beck) as disclosing such a feature.

As described above, Applicants have amended claim 1 to further define that the motion vector is computed from video data which represents an object in motion. However, the video data in Beck represents a static image. Beck teaches applying a motion vector representing a series of movements to this static image position data. Thus, the motion vector of Beck is not computed from video data representing a moving object, nor does the vector represent any movement of the object as captured in the original video data.

Beck teaches artificially moving an otherwise still object on the screen in such a manner so as to make it appear motionless to a viewer, in contrast to the claimed invention, which suppresses dithering patterns from appearing on objects viewed in motion on screen. Thus, the image data of Beck is combined with a traditional static dithering ("This notion of combining Motion Dithering with a static dithering technique is key to utilizing this approach successfully", see the last line in the "Results" section of Beck, emphasis added).

Finally, Applicants kindly draw the Examiner's attention to MPEP 2142 which states that the Examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. The Supreme Court has stated that "[t]he key to supporting any rejection under 35 U.S.C. § 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. *KSR Intl Co. v. Teleflex Inc.*, 82 USPQ2d 1385, 1396 (2007) (KSR). The Federal Circuit has reiterated that "rejections on obviousness cannot be sustained with mere conclusory statements; instead, there must be some articulated reasoning with some rational

underpinning to support the legal conclusion of obviousness." *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006).

The Action articulates no reasoning or explanation of how the fundamentally distinct motion vector disclosed in Beck would be implemented into a system configured for motion dithering. As noted above, this vector is not representative of the motion of an object contained in the original video data, nor is the vector used for motion dithering (Beck teaches only the use of traditional static dithering techniques). Moreover, Ishii makes no teaching, or even remotely suggests using a vector of any kind for altering a dithering function, let alone a vector representative of the motion of an object contained in the input video data. Accordingly, Applicants respectfully submit that merely stating that a motion vector could be used to alter the dithering function disclosed in Ishii comprises nothing more than an unsupported, conclusory statement of obviousness.

For at least these reasons, Applicants respectfully request the withdrawal of the 35 U.S.C. § 103(a) rejection of claim 1. Claims 2-6 should be patentable at least by virtue of their ultimate dependence from claim 1.

Claim 17 recites limitations similar to those described above with respect to claim 1, specifically, the computation of a motion vector from data which represents a moving object. Accordingly, claim 17 should be patentable for at least the reasons described above. Likewise, Claims 18-25 should be patentable at least by virtue of their ultimate dependence from claim 17.

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition,

because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

Conclusion

Having fully addressed the Examiner's rejections it is believed that, in view of the preceding amendments and remarks/arguments, this application stands in condition for allowance. Accordingly, reconsideration and allowance are respectfully solicited. If, however, the Examiner is of the opinion that such action cannot be taken, the Examiner is invited to contact the applicants' attorney at (215) 542-5824, so that a mutually convenient date and time for a telephonic interview may be scheduled.

Respectfully submitted,



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